

REMARKS

Reconsideration is requested.

Claims 4-15, 18-31 and 34 have been canceled, without prejudice. The canceled claims define non-elected subject matter. Claims 1-3, 16, 17, 32 and 33 are pending.

In response to the Office Action of December 20, 2006, the applicants elected, with traverse, the subject matter of the Examiner's Group I and, with traverse, SEQ ID NO:92. The restriction requirement of December 20, 2006 required an election as between the following Groups of subject matter:

Group I: claims 1-3, 16, 17, 32 and 33, as specifically drawn to an isolated nucleic acid sequence selected from the groups consisting of: (i) the nucleic acid sequence contained is SEQ ID NO: 1-73, 175, 177, 179, 181; (ii) variants thereof, wherein such variants have a nucleic acid sequence that is at least 70% identical to the sequence of (i) when aligned without allowing for gaps, and (iii) fragments of (i) or (ii) having a size of at least 20 nucleotides in length; and a gene comprising a sequence consisting of SEQ ID NOs 74-174, 176, 178, 180, 182-185;

Group II: claims 5 and 6 as specifically drawn to methods detecting a polynucleotide selected from the group consisting of SEQ ID NOs 1-173, 175, 177, 179, 181 or a fragment thereof using nucleic acid sequences that specifically hybridize thereto or using primers that result in the amplification thereof;

Group III: claims 7-9 as specifically drawn to methods of detecting a polynucleotide selected from the group consisting of SEQ ID NOs 1-173, 175, 177, 179, 181 or a fragment thereof wherein expression of said polynucleotide is detected by assaying for the polypeptide encoded by said polynucleotide;

Group IV: claims 10, 11, 14, 32 and 33 drawn to a polypeptide, or fragment thereof, encoded by a polynucleotide of SEQ ID NO:1-185;

Group V: claims 12, 13, 15 and 18 drawn to a monoclonal antibody that binds to a polypeptide of SEQ ID NO 1-185;

Group VI: claims 19-22, as specifically drawn to a method of treating prostate cancer comprising administering a ligand that specifically binds a gene or RNA comprising a sequence selected from the group consisting of SEQ ID NOS: 1-173, 175, 177, 179, 181, a variant thereof or a fragment of said gene or RNA;

Group VII: claims 19, 21, 22, 24-31, as specifically drawn to a method of treating prostate cancer comprising administering a ligand that specifically binds a protein or polypeptide encoded by a gene or RNA comprising a sequence selected from the group consisting of SEQ ID NOS: 1-173, 175, 177, 179, 181, a variant thereof or a fragment of said gene or RNA having a size of at least 20 nucleotides in length, or a polypeptide derived from SEQ ID NOS:174, 176, 178, 180, and 182-185;

Group VIII: claim 23 drawn to a method for treating prostate cancer comprising administering a polypeptide of Group IV; and

Group IX: claim 34 drawn to a method for screening, identifying, selecting, characterizing, or optimizing biologically active compounds comprising contacting a candidate compound with a target molecule and determining whether the candidate compound binds said target molecule.

The Examiner further required one of the following as an election of a further separately patentable invention, and not an election of species requirement:

If Group I was elected, a single nucleic acid SEQ ID NO, as each sequence represents a separate invention and not a species;

If Group II is elected, a single nucleic acid SEQ ID NO of claim 4, as each sequence represents a separate invention and not a species;

If Group III is elected, a single nucleic acid SEQ ID NO of claim 4, as each sequence represents a separate invention and not a species;

If Group IV is elected, a single nucleic acid SEQ ID NO from claim 10 or claim 32, as each sequence represents a separate invention and not a species;

If Group V is elected, a single nucleic acid SEQ ID NO, as each sequence represents a separate invention and not a species;

If Group VI is elected, a single nucleic acid SEQ ID NO, as each sequence represents a separate invention and not a species;

If Group VII is elected, a single nucleic acid SEQ ID NO, as each sequence represents a separate invention and not a species;

If Group VIII is elected, a single SEQ ID NO from claim 10, as each sequence represents a separate invention and not a species; and

If Group IX is elected, a single SEQ ID NO from claim 10, as each sequence represents a separate invention and not a species.

The Examiner has made the restriction requirement final and only examined the elected Group and the elected SEQ ID NO:92.

The claims have been amended without prejudice to cancel the non-elected subject matter and advance prosecution.

The objection to claims 1-3, 16, 17, 32 and 33 stated on page 3 of the Office Action dated April 10, 2007 is obviated by the above amendments. Withdrawal of the objection is requested.

The objection to claim 3 stated on page 3 of the Office Action dated April 10, 2007 is obviated by the above amendments. The claim has been amended in a manner suggested by the Examiner. Withdrawal of the objection is requested.

The objection to claims 32 and 33 stated on page 3 of the Office Action dated April 10, 2007 is obviated by the above amendments. Withdrawal of the objection is requested.

The Section 112, second paragraph, rejection of claims 1-3, 16 and 17, is obviated by the above amendments. Specifically, the recitation "contained in" has been deleted, without prejudice, to advance prosecution. Further, claim 16 has been amended to be consistent with the claim from which it depends. Withdrawal of the Section 112, second paragraph, rejection is requested.

The Section 112, first paragraph "written description", rejection of claims 1-3, 16, 17, 32 and 33 is believed to be obviated by the above amendments. The applicants believe that the disclosure supports the presently claimed genus. The applicants believe that one of ordinary skill in the art will appreciate that the applicants were in possession of the claimed invention at the time the application was filed. Reconsideration and withdrawal of the Section 112, first paragraph, rejection are requested.

The Section 102 rejection of claims 1-3, 16, 17, 32 and 33 over Gish (U.S. Patent Application Publication No. 2007/0014801), is believed to be obviated by the above amendments.

The Examiner is requested to see the attached reproduction of Blast views of the sequences under consideration. The top three alignments are sequences SEQ ID NOs: 91, 92 and 93, as disclosed in the present application, which are all STEAP2. As illustrated by the alignments, the sequences are all splice variants of the reference sequence NM_152999. The sequence from the Gish patent is aligned in the bottom alignment. The applicants believe the attached demonstrates that the claimed sequences have important differences compared to those of Gish et al, such as that they all contain novel C-terminal sequences resulting from splicing, which novel sequences can be used for detection, and in kits to determine the presence of prostate cancer.

Accordingly, while there may be a common portion in the sequences of Gish and SEQ ID NO: 92, an accurate comparison shows major sequence differences which characterize the alternatively spliced isoform represented by SEQ ID NO: 92. These sequence differences are believed to clearly support the patentability of the present claims. In particular, such sequences were not known or disclosed in the cited art, and their utility for the detection of prostate cancer would not have been obvious from the cited art.

It is therefore submitted that the claimed invention is novel and inventive over the cited art. Withdrawal of the Section 102 rejection is requested.

EINSTEIN et al.
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Amendment

The claims are submitted to be in condition for allowance and a Notice to that effect is requested. The Examiner is requested to contact the undersigned in the event anything further is required to place the application in condition for allowance.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: /B. J. Sadoff/
 B. J. Sadoff
 Reg. No. 36,663

BJS:
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

